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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,748	09/04/2003	David Allen Little	2003P11951US	5240

7590

02/17/2006

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

CASAREGOLA, LOUIS J

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/654,748

Applicant(s)

LITTLE, DAVID ALLEN

Examiner

Louis J. Casaregola

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,14,16-17 is/are rejected.
- 7) ☒ Claim(s) 2,9-13,15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC 102

Claims 1, 3, 6-8, 14, 16 and 17 are rejected under 35 USC 102(b) as being anticipated by Takahashi et al.

The steps comprising the claimed method are all present in the operation of conventional gas turbine combustion systems of the type disclosed by Takahashi. As indicated by Takahashi's Figures 1 and 4, his engine comprises plural combustors each having a primary fuel nozzle 103, which corresponds to the claimed pilot nozzle, and a secondary fuel nozzle 104, which corresponds to the claimed other nozzle. As further indicated by Takahashi's Figures 2 and 3, his system is operated at part load between times 0 and t_1 such that secondary nozzle fuel F_2 is substantially restricted while pilot nozzle fuel F_1 is maintained at a high level. While the claims state that this type of fuel split is done in a pair of combustors (claim 1) or a first combustor (claim 14), there is no limitation on the fuel split in the remaining combustors. The claims are thus sufficiently broad to read on systems like Takahashi's which provide the required fuel split in all combustors – any two combustors would correspond to the pair of combustors specified in claim 1, and any single combustor would correspond to the first combustor in claim 14. Furthermore, the two combustors in Takahashi could include pairs in which the combustors are diagonally opposed, adjacent, or at 90° angles as variously specified in claims 6-8 and 16.

It is further noted that the claimed method is referred to as a “method for reducing CO emissions”. It is maintained that if the broadly recited steps in the present claims are presumed capable of achieving such a result, then the equivalent steps in the prior art must be presumed equally capable.

With regard to claims 3 and 17, it is additionally pointed out that the recited fuel ring and plurality of nozzles merely define a conventional fuel manifold, which corresponds to Takahashi's manifold 202 and/or 204. While Takahashi's manifolds are shown schematically as straight lines, it is clear that they must actually be circular or ring-shaped to properly connect with a gas turbine combustion system.

Claim Rejections - 35 USC 103

Claims 4 and 5 are rejected under 35 USC 103(a) as being unpatentable over Takahashi et al in view of Evans.

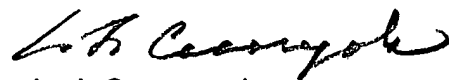
Exhaust temperature limiters are well known expedients for use with gas turbine fuel controls as shown, for example, by Greune; see elements 18, 28, etc. It would have been obvious to add such a feature to Takahashi turbine engine control system for the purpose of preventing temperature-related engine damage.

Allowable Subject Matter

Claims 2, 9-13 and 15 contain allowable subject matter but are objected to as depending from rejected parent claims. If rewritten in independent form, these claims will be allowed.

Additional References

Takahara et al and Mandai et al are cited as disclosing further pertinent examples of gas turbine combustion systems with pilot and main fuel nozzles.



L. J. Casaregola
571-272-4826 (M-F; 7:30-4:00)
571-273-8300 FAX
June 26, 2001

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).